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ABSTRACT

This paper overviews existing research on how one teaches the older person. It is aimed at the many persons who work with older adults, regardless of whether they are trained to teach older adults. Suggestions are outlined for the design and implementation of effective education for older persons. Several areas that are examined are (1) the history of adult learning (includes models, stages, and theories: memory and intellect: and learning needs and obstacles): (2) the adult education instructor (includes the teacher as facilitator: the teaching/learning process: and self-directed learning): (3) techniques of altering traditional modes of dispensing information and developing personal instructor approaches and styles (discusses interference, hesitancy, speed and pacing, and organizational and associational abilities): and (4) the need for further research. Appended materials contain some anecdotal experiences related to working with older adults and a list of relevant resources such as periodicals, professional associations, political groups, and professional training opportunities. (CT)

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Information Series No. 209

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PREPARING HUMAN SERVICE PRACTITIONERS TO TEACH OLDER ADULTS

written by

Roger Hiemstra
Iowa State University

The ERIC Clearinghouse on Adult, Career, and Vocational Education
The National Center for Research in Vocational Education
The Ohio State University
1960 Kenny Road
Columbus, Ohio 43210

1980

CE 027 092

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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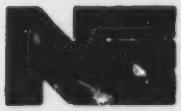

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FOREWORD

The Educational Resources Information Center on Adult, Career, and Vocational Education (ERIC/ACVE) is one of sixteen clearinghouses in a nationwide information system that is funded by the National Institute of Education. One of the functions of the Clearinghouse is to interpret the literature that is entered in the ERIC data base. This paper should be of particular interest to practitioners seeking concrete guidelines and suggestions for teaching older adults and university faculty and graduate students seeking a broad overview of the literature on teaching older adults.

The profession is indebted to Roger Hiemstra for his scholarship in the preparation of this paper. Recognition also is due Suzanne D. Wilcos, City University of New York; Pearl Greenstein, Rutgers University; and Nancy Lust, The National Center for Research in Vocational Education, for their critical review of the manuscript prior to its final revision and publication. Robert D. Bhaerman, Assistant Director for Career Education at the ERIC Clearinghouse on Adult, Career, and Vocational Education, coordinated the publication's development.

Robert E. Taylor
Executive Director
The National Center for Research
in Vocational Education

ABSTRACT

This paper overviews existing research on how one teaches the older person. It is aimed at the many persons who work with older adults, regardless of whether they are trained to teach older adults. Suggestions are outlined for the design and implementation of effective education for older persons. Several areas that are examined are (1) the history of adult learning (includes models, stages, and theories; memory and intellect; and learning needs and obstacles); (2) the adult education instructor (includes the teacher as facilitator; the teaching/learning process; and self-directed learning); (3) techniques of altering traditional modes of dispensing information and developing personal instructor approaches and styles (discusses interference, hesitancy, speed and pacing, and organizational and associational abilities); and (4) the need for further research. Appended materials contain some anecdotal experiences related to working with older adults and a list of relevant resources such as periodicals, professional associations, political groups, and professional training opportunities. (CT)

DESC: *Educational Research; *Older Adults; *Adult Educators; Program Design; Program Implementation; *Teaching Methods; *Educational History; Literature Reviews; Educational Theories; Needs Assessment; *Learning Problems; Learning Processes

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INTRODUCTION

It will be no surprise to readers of this paper that the growth in the elderly population of the United States has been accelerating rapidly in the past two decades. The growth rate has been exceeded only by the interest of many people in the elderly population. A variety of human services practitioners now appear to have the older person as the focus of their professional activities. Numerous volunteers spend considerable time each week with senior citizens. Various educational specialists are concerned with providing learning experiences for such persons. As Sheppard (1979) recently indicated, educational opportunities for older people are increasing. Numerous government agencies now direct their efforts toward older citizens. Finally, researchers from both the physical and the social sciences continue the wide-ranging study of aging, the aged, and how to work with the aged.

It is this latter group that provides the base of information for this paper. However, it is no easy task to interpret the abundance of available research related in some way to working with and teaching older persons. Research findings often are disparate in nature; frequently disagreement is found among researchers working on similar problems. Since new research disclosures replace previous knowledge almost daily, it is sometimes difficult to draw reliable implications for practice.

The purpose of this paper is to present a brief overview of existing research regarding how one teaches the older person.

However, as indicated, it is not possible to cover in depth every issue of importance to the teaching/learning process. The paper, nevertheless, should be useful to many persons (i.e., those who are trained or untrained, skilled or unskilled) who work with older adults. The intended audience is the "human services practitioner." Admittedly, this is a broad term designed to cover a variety of people such as social workers, extension specialists, librarians, leisure service providers, volunteer workers, counselors, and aging network employees. It is assumed that many of these individuals will not have had much, or in some instances, any, professional training for working with older persons. An effort will be made, therefore, to outline in practical terms what can be suggested from the research regarding the design and implementation of effective education for older persons. Hopefully, enough resources will be provided to stimulate readers toward further study. In addition, adult educators, educational gerontologists, and a variety of researchers also should find the paper useful in providing an interpretational base of information. Such audiences can further this base by challenging or substantiating points made throughout the paper.

Before we turn to the literature, however, several initial points should be made. In terms of definitions, the healthy older adult, the biggest percentage of all people over age sixty-five, is primarily what the author has in mind when making suggestions about teaching. Frail, institutionalized, or handicapped adults obviously serve as research subjects in many instances, but special care and expertise often confound any needed teaching and learning interaction. (For example, see anecdotes in Appendix A.) Thus, the assumption is made that older adults are capable of learning, are willing to learn under the right conditions, and will benefit from good teaching and learning.

Lastly, in terms of some general problems of teaching older adults, many persons who find themselves in a situation of needing to organize some sort of learning activity for older persons have had no formal preparation for teaching, especially teaching adults. Therefore, directing a pre-retirement planning program, delivering nutrition information at a congregate meal site, or instructing a group of elderly on how to fill out governmental forms often must be done by instinct, trial and error, or modeling from past experiences. Another problem centers around how to organize and present necessary information to insure maximum learning. Questions about appropriate teaching techniques, learning inhibitors, how to structure learning experiences, and how to evaluate progress continue to be raised. Still another problem facing many people who attempt to conduct learning experiences centers around defining the role of the

learner. Most authorities suggest that adult learners take an active role in the entire teaching/learning process. This role, quite different from the role most learners assumed during their formal education as a youth, includes their active participation in such activities as assessing needs, planning content, securing resources, and being involved in implementation. While older adults as well as younger ones appear to thrive on such involvement, it is not easy to initiate such new ways of learning. But the result of these new modalities can be highly satisfying to the older adult who is developing new responsibilities for his or her learning.

THE OLDER ADULT AS LEARNER

OLDER ADULTS CA LEARN

The history of knowledge about adult learning capacity reads like the pioneering efforts that have been basic to the western world, that is, the frontiers constantly get pushed further out. Thorndike's (1928) pioneering efforts resulted in a frontier that pointed with optimism to only a gradual decline in learning ability until age forty-five, at which time a sharp decline could be expected. More comfort was found in Jones and Conrad's (1933) famous Army Alpha Test research which showed that the gradual decline continued until age sixty. In the 1950s longitudinal research reports began to show adult ability in a much improved light; for example, Terman and Oden (1959) demonstrated actual gains with age on some cognitive measures.

In the early 1960s, the explosion in research on the older adult began. Most of the earlier studies and some of those in the 1960s were tied to stimulus-response (S-R) notions regarding human behavior, or what Hultsch (1977) called the "associative" model. In this model, learning and memory were believed to be tied to responses to learning stimuli; differences in age group were associated with various types of interferences.

The next evolutionary change began to emerge in the early to mid-1960s, when notions about the human organism were inserted into the older S-R model. McClusky (1971) described the Stimulus-Organism-Response (S-O-R) formula as the key that unlocked the door to communicating and interacting with learners. Hultsch (1977) referred to this as the information processing model. Based on notions about learning as the intake

of information through our senses, the sorting and processing of that information in short-term memory, and the transfer and storage of relevant items into long-term memory, positive support for lifelong learning potential began to emerge (Craik, 1977). Individual differences began to be accounted for. Many explanations for intellectual declines were found to be tied to both cognitive and non-cognitive factors. Compensatory, corrective, or adult-specific teaching techniques were developed.

A new stage appears to be evolving in the understanding of adult learning through the life span. Labouvie-Vief (1977) suggested that much of our past research had built-in biases because many subjects of studies were born in historical eras that did not include rapid change. Certainly the current widespread interest in lifelong learning is tied to some fast moving changes; the awareness of emerging human needs is tied to change-related factors. The importance of developmental stages, interest in life-span education, research on cognitive development, and cognitive style differences are all related events.

It may well be that this newest stage - and the paying attention to ways of optimizing cognitive development - will offer the teacher of older adults the most help in the future. Hultsch (1977) offered a name for this stage - contextual - and has suggested that the social and psychological context of the learning event (i.e., what the individual experiences) is extremely important. Thus, learning is the transaction between each individual and his or her restructuring of personal knowledge in light of new learnings.

Hiemstra (1975, 1976c) reported that older adults spend 300 or more hours each year in learning endeavors. Birren and Woodruff (1973) and McMahon (1979) suggested that the rapidity of social change, changing career patterns, and changing attitudes toward education are some of the major reasons for this high participation in learning. The amount of formal education, the amount of social activity, and occupational status also appear to be associated with participation in learning activities.

Of most importance to the person wishing to be a successful teacher is the fact everyone recognizes: individual differences among older adults exist. The elderly simply cannot be treated as a single group; they should be viewed as heterogeneous, multi-dimensional in characteristics, and varied in terms of needs and abilities. While the elderly often appear as victims of stereotyping in terms of ability (Kasworm, 1978), some seventy year olds will do as well or better than many younger people (Arenberg and Robertson-Tchabo, 1977).

MODELS, STAGES, AND THEORIES

In short, a variety of research exists that relates in some manner to models, stages, and theories about how adult learning takes place. It often is difficult to determine exactly how each researcher is referring to the learning process in relationship to others who also describe learning activity. In fact, there appears to be considerable disagreement in terms of capabilities, limitations, and the exact nature of learning.

Some earlier theories about older adults as learners have been proven wrong or else have evolved as a result of additional knowledge or longitudinal research. A disengagement theory, or the increasing separation from activity with age, was a popular notion during the 1950s and 1960s (Cumming and Henry, 1961; Cumming, 1963). As Moody (1976) suggested, this approach characterized the social services era of "fixing" problems largely through the intervention of public policy and transfer payments. A better understanding of older adults has led to a fairly wide-spread dismissal of the disengaging notion and replaced it with concepts on compensating, adapting, and activity abilities. (E.g., see R.D. Gordon, 1974; Labouvie-Vief, 1977; Olbrick and Thomae, 1978; Palmore, 1970).

MEMORY AND INTELLECT

A number of studies on older persons report a slow decline in intelligence with age (Jones, 1979). The Weschler Adult Intelligence Scale has been used by many researchers. While this test utilizes verbal response answers based on accumulated knowledge and vocabulary, the older person probably is penalized because of built-in time constraints (Levine, 1971). Hence, once the speed factor is removed, many researchers believe that intelligence change is not age related (Bolton, 1978). In fact, some studies have shown little loss and some actual gain in related tests of vocabulary, general information, verbal reasoning, experience, and judgment with age (Jones, 1979). Given good health, highly mentally active adults tend to stay that way throughout their life (Botwinick, 1977). As McClusky (1973) reminds us, individual differences exist among people regardless of age. Thus, later life intelligence is better characterized by plasticity or flexibility rather than by universal decline (Labouvie-Vief, 1976).

"The jury is still out" in terms of memory ability. Botwinick (1967) and Catino et al. (1977) have found some short term

memory loss with age. Raymond (1971), however, found no deterioration in short term recall efforts. Several researchers (Aiken, 1978; Birren, 1968; and Schaie and Strother, 1968) have suggested that there appear to be memory-associated intellectual deficits. Arenberg and Robertson (n.d.) indicated there are problems and declines that we must deal with. Many researchers have indicated that the issue is not really memory problems but that they relate to other factors. For example, Norman (1973) suggested that older learners simply do not understand certain concepts or cues for a number of reasons. Haase (1979) indicated that "rusty thinking" might be the reason for apparent intelligence or memory difficulties. An unwieldly amount of information to be processed may be the major problem according to Arenberg and Robertson-Tchabo, 1977. Several studies indicated that discriminating, coding discrete information, or note-taking abilities may be weaker. (E.g., see Botwinick, 1978; Craik and Masini, 1975; Kausler and Kleim, 1978; Schoenfield et al., 1972.)

Birren (1969) provides an optimistic concluding note, namely, that the elderly become aware of inherent limitations during the aging process and attempt to compensate in various ways. Hopefully, the current research thrust to understand thinking and intellectual change in light of the context of life itself will help to provide new information.

LEARNING NEEDS AND OBSTACLES

Many researchers have stressed the importance of understanding the needs and interests of older persons. A number of them (Goodrow, 1974, 1975; Havighurst, 1976; Hiemstra, 1975, 1976b, and 1977-78; and Marcus, 1976, 1978), all have suggested a classification scheme (instrumental versus expressive) related to educational needs and utility expectations. Hiemstra and Long (1974) and Londoner (1978) described the complexities involved in how needs are assessed and in how to use expert advice regarding needs.

It is important to understand some of the potential obstacles facing older adult learners. Although there may be problems specific to a location or economic or clientele group, the literature suggests several common obstacles, e.g., lack of transportation, dislike of evening programs, lack of time or energy, costs, personal responsibilities, failing health, lack of confidence, personal feeling of being too old, and lack of knowledge about educational possibilities. (E.g., see Cross, Valley, and Associates, 1975; DeCrow, n.d.; Graney and Hays, 1976; Hiemstra, 1972, 1975; Lersten, 1974; and Symposium, 1973.)

A variety of health-related factors and a person's overall health status also appear to affect learning ability and activity. Fatigue, for example, can be a problem as Gounard and Hulicka (1977) noted. Perceptions by older persons of declining energy or health as a barrier have been reported by Hiemstra (1972, 1975). Agruso (1978), Knox (1977, 1978), and Verner and Davison (1971) each have described the effects of declining vision and hearing capabilities on learning. Wilkie and Eisdorfer (1971) mentioned hypertension as a possible inhibitor.

It is important, therefore, that teachers understand the relationship of such factors as real needs, potential obstacles, and various health factors to the learning endeavors of older persons. McClusky (1973) theorized that people have certain reserves or margins of power available to overcome loads they encounter. The skillful teacher, however, needs to be sensitive to such loads becoming too great. Birren (1969) suggested that the elderly often recognize their needs to conserve energy and maintain supportive levels of health. Bolton (1978), however, pointed out the need for additional research on this issue.

TEACHING OLDER ADULTS

INSTRUCTOR ROLES

The Teacher As Facilitator

In the past two decades there has been fairly consistent support of the notion that a process of facilitating learning is required for success with the adult learner. Knowles' (1970) introduction of the notion of andragogy and the corresponding teaching/learning process provided a comprehensive explanation of the facilitator role. Lebel (1978) and Meyer (1977) also explored the concept of andragogy in terms of the older adult.

There are certain crucial elements regarding the facilitator notion. One of these is the active involvement of the learner in the entire educational activity. This includes assessing needs, setting objectives, identifying resources, participating in the learning activities, and helping to evaluate the experience. Alpaugh, Renner, and Birren (1976) have suggested that teachers help learners form their own learning strategies. Mullan and Gorman (1972) encouraged the use of peer groups both for learning activities and for providing feedback on progress to each other, while Knox (1977) encouraged the establishment of a climate which permits the learner freedom for individual exploration.

Several authors have emphasized the need for good interaction and communication between teacher and learner as an important part of the process. This requires the teacher to understand the aging process, the nature of learning, and his or her own attitudes toward teaching.

Another aspect of the facilitator notion that is gaining increasing usage in terms of helping learners guide their own learning is the learning contract (Knowles, 1975; Cross, 1977). Research on the effectiveness of such contracts with older adults is still necessary. The prospective teacher may wish to explore their utility.

An additional facilitator element important to the success of teaching and learning is the evaluation of learner progress. Several researchers have cautioned against the use of traditional testing procedures. Recognition rather than recall techniques, frequent feedback on learner progress, and self- or peer-evaluation are alternative suggestions cited by Arenberg and Robertson, n.d.; Eysenck, 1975; Knowles, 1970; Mullan and Gorman, 1972; and Witte and Freund, 1976.

Another problem facing many practitioners relates to what the role of the teacher should be in the entire learning process. Historic expectations, often stemming from what such practitioners have seen modeled, have mainly focused on the belief that the dispensing of knowledge from an expert to a learner-receptor is the standard model. However, most authorities suggest that the successful teacher of adults utilizes facilitator techniques in managing the instructional process.

What is being advocated here is that the person who wishes to be a successful instructor of older adults must become a facilitator of learning, putting process before content. Expertise on some content area often takes on secondary importance. The adult educator ideally performs several functions, each of which contributes to his or her role as facilitator, for example:

- Serves as one of several possible resources in a content area
- Locates appropriate resources or new information as warranted by student needs
- Arranges for and manages the successful employment of a variety of learning resources needed to accomplish certain goals
- Stimulates learners' interest in and motivation toward certain topics
- Helps learners develop positive attitudes toward learning and fosters their independence

- o Promotes discussion, questioning, and self-directed inquiry
- o Evaluates learner progress and stimulates learners' self-evaluation

Success with such an approach will depend on the potential instructor's attitude and willingness to carry out some of the suggested duties. A variety of ideas and techniques are available in the literature that either relate directly to the facilitator notion or that help to explain some of the teaching and learning requirements.

A Teaching/Learning Process

One educator who has brought much attention to the teaching of adults is Knowles (1970). His development of a beginning theoretical framework for the teaching/learning process, andragogy, has aided many researchers in focusing their efforts. The planning and design elements central to his framework will serve as a foundation for the process to be described here. In addition, the notion described earlier that adults of all ages have been found to prefer themselves as the primary planner, director of, and resource for learning will be incorporated into the process (Hiemstra, 1975, 1976c; Tough, 1979).

Table 1 below outlines the basic process elements suggested for human services practitioners in planning educational activities for older adults. The process rests on the following basic assumptions and is adapted from Knowles' (1970) work:

1. Self-Concept. As a person matures, individual self-concept evolves from dependency toward independence and self-direction.
2. Experience. A person accumulates a huge reservior of knowledge and experience during the maturation process that becomes an increasing resource for learning.
3. Readiness to Learn. During the aging process, a person's readiness for learning becomes increasingly oriented to various developmental tasks and social role expectations.
4. Time Perspective. In maturity, a person is most motivated to learn when immediate application is needed or can be seen.
5. Learning Needs. During aging, a person's orientation toward learning appears to shift from subject-centered awareness to problem-centered and coping needs.

One should also note that the process assumes that most learning endeavors will involve people primarily in group settings. However, the self-directed learner can be helped to utilize portions of the process in planning and guiding his or her own learning. Furthermore, it is anticipated that the process - or most portions of it - can be adapted to almost any type of setting.

The planning elements in Table 1 outline a logical flow of events in preparing, planning, and carrying out a learning experience. The first four elements call for an active involvement of the learner in determining relevant needs and personal goals. In a two- or three-hour session, as much as one hour might be invested in the preparatory stage. In a several-session course or workshop, the first one or two sessions might be utilized. (See Appendix A.) However, the commitment toward, and feeling of ownership for, the subsequent learning builds meaningfulness into subsequent activities that more than make up for any "lost" time. One should note, however, that the traditional instructor role of dispensing knowledge through lecture is greatly altered. Knowles (1970, 1975) and Meyer (1977) provide helpful discussions of related planning ideas, corresponding techniques, and underlying assumptions.

TABLE 1
A Suggested Teaching/Learning Process for Adults:
Planning Elements and Methodological Implications

PLANNING ELEMENTS	METHODOLOGICAL IMPLICATIONS
Establishing a Learning Environment	Encourage informality and a spirit of mutuality. Create a non-threatening setting and work to reduce any initial anxiety that may exist. Arrange for comfortable seating, an attractive setting, and the maximization of adequate sight and sound qualities. Facilitate learners getting acquainted with each other through use of introductions, name tags, circle seating, etc.
Develop a Planning Mechanism	Use mutual planning techniques. o Form small planning and discussion groups. o Encourage cooperative efforts in the planning process. Provide for adequate input by learners in the planning effort to promote feelings of personal ownership.
Diagnose Learning Needs and Interests	Provide some initial focus and guidance in determining basic or potential learning parameters. Facilitate some initial self-diagnosis by learners through self-rating forms or personal interviews. Help to refine the majority needs through small group discussions, decision-making techniques, or facilitator-student dialogues. Establish a mechanism for continuous diagnosis or re-diagnosis. o Develop periodic feedback devices. o Encourage students periodically to reexamine their progress in relationship to need.

TABLE 1 (Con't.)

PLANNING ELEMENTS	METHODOLOGICAL IMPLICATIONS
Formulate Student and Group Objectives Based on Determined Needs	Provide a tentative outline of group objectives based on the needs assessed above and stated in measurable terms. o Discuss the objectives in a large group setting or facilitate small group discussion of them. o Revise the objectives as necessary. Facilitate the development of individual learner objectives in relation to the group objectives for maximum learner growth. o Use a performance contract process (Knowles, 1975). o Obtain a personal commitment toward and ownership of the learning necessary to meet objectives.
Design and Implement the Learning Experience	Promote the use of a wide variety of learning resources. o Make available instructor-developed and instructor-located materials. o Use outside content specialists to meet any unique needs. o Encourage learners to locate and provide learning resources to their peers. Promote self-directed inquiry and the use of resources outside the traditional learning environment. Help learners design appropriate experiences according to need and ability. o Match objectives (learning contracts) to appropriate resources. o Promote peer examination and discussion of learning contracts.

TABLE 1 (Con't.)

PLANNING ELEMENTS	METHODOLOGICAL IMPLICATIONS
	o Provide instructor feedback on design appropriateness. Encourage the use of a variety of self-directed learning activities. o Form study groups to focus on a single topic. o Use reading logs, diaries, or related experiences. o Promote mini-internships, field visits, interviews, etc.
Evaluate the Learning Experiences	Encourage individually determined evaluation techniques. o Use peer group validation. o Use evaluations by outside experts. o Ask students to rediagnose their learning needs in terms of growth or change. Use mutually determined evaluations by the student and the instructor (through the learning contract). Use non-graded or anonymous testing procedures where feasible. Provide continuous feedback on learner progress.

Adapted from Knowles (1970).

SELF-DIRECTED LEARNING

Perhaps one of the most exciting current innovations related to adult learning has been the discovery that adults of all ages--as noted above--prefer themselves as the primary planner and director of their own learning (Hiemstra, 1976a; Penland, 1979; and Tough, 1978, 1979). The selection of "self" as the primary planner also held true in some research on the older adult learner. Hiemstra (1975, 1976c) studied the learning project activity of 214 adults (age 55 and older) in Nebraska. The data show that older adults each undertook an average of 3.3 learning projects. They spent an average of 324 hours on their learning activities. Fifty-five percent of the projects were self-planned, 20 percent were group planned, 10 percent were planned on a one-to-one basis and 10 percent had no dominant type of planner. Fifty-four percent of their learning activities were self-fulfillment in nature, which included arts, crafts, recreation, and religion.

Although a great deal more needs to be known about the implications of such research for facilitators of older adult learning, several authors have offered some potentially useful advice. For example, R. D. Gordon (1974) suggested that efficiency and creative self-direction can be enhanced in older persons; Bolton (1978) indicated that "discovery teaching methods can overcome various barriers; Knowles (Symposium, 1973) urged educators to help people learn self-directed skills; Jones (1980) noted that facilitators should base learning on self-derived interests as opposed to teacher-generated assignments. A variety of non-traditional, self-directed learning modes and techniques with older adults are no doubt possible or already exist as parts of various disciplines; they await our discovery, assessment, and adaptation.

USEFUL TECHNIQUES

The process and research noted above suggests that the successful instructor of older adults must be a facilitator and manager of the learning environment and must find means for utilizing the self-directed abilities of learners. Recommendations for altering the more traditional mode of dispensing information as well as evaluating the level of acquisition or comprehension through testing procedures appear to have wide-spread literature support. Unfortunately, no uniform agreement exists in terms of what make up instructional interactions. Several resources (see Appendix B) should provide considerable help to the reader in building some understanding of existing knowledge regarding instruction.

Another problem is that not a great deal of research on selecting techniques and strategies specific to the older adult has been carried out. Some potential advice exists. White and Hansen (1976) have suggested that five to twenty people is the optimal small group size, with seven to ten the best number for good interaction and communication. They also suggested that students face one another; they recommended the use of discussion groups for optimal interaction. Others have urged the use of combined auditory and visual techniques (Arenberg, 1968, 1977; Gounard and Hulicka, 1977). Hulicka and Grossman (1967) suggested using review strategies as a regular part of a learning activity. Norman (1973) urged that older learners be involved in organizing the content or material during the learning process. Techniques that employ concrete stimuli but that reduce stimulus discriminability and that avoid competition or too much complexity also have been recommended (Arenberg and Robertson-Tchabo, 1977). However, research that provides confirming support to such findings and additional specific advice is required before a complete instructional process can be outlined.

Table 2 below displays an outline of various sources providing a variety of suggestions to guide instructors in developing personal approaches and styles. These sources and research findings were utilized to derive several recommendations for practice. The table is organized around seven categories related to elements of instructional awareness or organizational need. A human services practitioner who desires to be an effective instructor of older adults can employ the planning process outlined in Table 1 and the application suggestions in Table 2 to develop a personal teaching process. Obviously, trial and error, practice, and allowances for individual preferences and unique teaching situations will be required.

TABLE 2

Guiding the Older Adult Learner: Suggestions from the Literature

INSTRUCTIONAL ELEMENT	RESEARCHERS	APPLICATION SUGGESTIONS
Personal Approach of the Instructor	Gounard & Hulicka (1977) Hixon (1968) Jones (1980) Knox (1977) Mullan and Gorman (1972) Wass and West (1970)	Be positive, supportive, and helpful. Work to make the learner feel welcome. Maintain an environment of informality and levity. Help to promote learner confidence and self respect. Treat the older learner with dignity.
Sensitivity to Needs (Sensory Physical, Perceptual	Arenberg (1976, 1977) Gordon, R.D. (1974) Gounard & Hulicka (1977) Haase (1979) Jones (1980) Merriam (1977) Symposium (1973)	Pay attention to the physical environment. Reduce distractions. Insure that comfortable heating and proper ventilation exist. Be sensitive to declining vision difficulties for some learners. Insure that lots of light is available. Use high contrast on visuals and handouts. Reduce glare or direct sunlight. Use large, bold print or type. Allow time for adjustment when going from light to dark or vice versa (showing a film, for example). Be sensitive to declining hearing problems for some learners. Use extra voice or media amplification.

TABLE 2, con't.

INSTRUCTIONAL ELEMENT	RESEARCHERS	APPLICATION SUGGESTIONS
		Be prepared to help some learners move closer to sound sources. Be sensitive to the manner of the presentation. Read material aloud where possible. Use combined auditory and visual presentation modes.
Relating to the Needs & Experiences of Learners	Glynn & Muth (1979) Gordon, R.D. (1974) Gounard & Hulicka (1977) Lersten (1974) Symposium (1973)	Base the learning activities on the needs and interests of the learners. Help learners to relate new knowledge to past experiences. If text material is utilized help learners tie the information to knowledge they have already. Be flexible in terms of differing needs, interests, and abilities that may exist.
Attention to the Pace of Learning	Fruend & Witte (1976) Gounard & Hulicka (1977) Jones (1980) Knox (1977) Lersten (1974) Mullan & Gorman (1972) Okun (1977) Symposium (1973)	Allow more time for all aspects of the educational activity. Keep sessions shorter, the discussion time of subject matter shorter, and present small amounts of information at any one time. Keep the pressure of time at a minimum. Allow for longer periods of time between stimuli, for responding to questions, and for group discussions. Avoid sudden surprises or changes.

TABLE 2, con't.

INSTRUCTIONAL ELEMENT	RESEARCHERS	APPLICATION SUGGESTIONS
		Permit and promote self pacing. Promote certainty, confidence, and success by moving from easy material to difficult (build on earlier successes).
Involving the Learner in the Learning Process	Gordon, R.D. (1974) Hiemstra (1975, 1976a) Knox (1977) Mullan & Gorman (1972) Tough (1979) Wass and West (1977)	Facilitate the learner's active involvement in all aspects of the learning process. Facilitate self-directed learning. Encourage self-directed determining of learning goals, learning approaches, and learning resources. Reduce learner dependency on the instructor and increase self-responsibility. Enhance the development of a positive self-concept. Promote self-motivation and learning efficiency. Utilize discovery techniques.
Organization & Meaningfulness in the Learning Material	Craik (1977) Glynn and Muth (1979) Gordon, R.D. (1974) Gounard & Hulicka (1977) Hultsch (1975) Jones (1980) Knox (1977) Lersten (1974)	Be highly organized. Instructional objectives can help to focus and orient. Use prequestions, outlines, study guides, or other forms of advanced organizing techniques. Help learners organize and reorganize their learning. Stress overlearning, differences between concepts, tying together of concepts, and

TABLE 2 (Con't).

INSTRUCTIONAL ELEMENT	RESEARCHERS	APPLICATION SUGGESTIONS
		relevancy of information as opposed to just memory work. Encourage learners and show them how to take notes or outline. Make organizing the material part of the learning process. Encourage practicing techniques. Explain the use of specific encoding procedures. Utilize various cuing devices. Use headings, summaries, review helps, etc. Encourage the learners to develop various mediators or mnemonics (visual images, rhymes, acronymns, self-designed coding schemes, etc.). Seek cues that are familiar or that can be tied to past knowledge. Utilize materials and information that will have real meaning to the learner. Use a highly stimulating approach that will appeal to several senses. Use concrete examples, based on past experiences of the learner where possible.
Evaluation Related to the Learning Effort	Gordon, R. D. (1974) Gounard and Hulicka (1977)	Use recognition techniques as opposed to more traditional recall methods.

TABLE 2 (Con't.)

INSTRUCTIONAL ELEMENT	RESEARCHERS	APPLICATION SUGGESTIONS
	Hixon (1968) Hulicka and Grossman (1967) Jones (1980) Mullan and Gorman (1972) Okun and Siegler (1977)	Utilize multiple choice testing instead of essay. Minimize the chance of failure the impact of making errors (test-retest, pass-retake, non-grading, etc.) Provide regular feedback on progress. Utilize positive feedback techniques. Use review strategies. Use peer group feedback/ evaluation techniques. Reduce or eliminate required homework and graded testing procedures.

The sections which follow are intended to present a brief overview of some of the important related terminology found in the research literature.

Meaningfulness

By interpreting research by Witte and Freund (1976) and discussions by Winn et al. (1976), a suggestion can be made to teachers of older adults that when facilitating learning they utilize concrete learning stimuli and techniques which facilitate matching or associating related ideas or concepts. Hultsch (1971) indicated that meaningfulness helped in remembering and recalling activities; Alpaugh et al. (1976) found a preference for clarity among older subjects. Speed of recognition also was tied to this concept by Eysenck (1975). Grotelueschen (1972) suggested that meaningful items help in the anchoring of new information to existing ideas, while Calhoun and Gounard (1979) reported that meaningfulness promotes increased overall learning. Lastly, Taub (1977) indicated that apparently meaningful word possibilities facilitate the improvement of memory storage.

Thus, meaninfulness becomes the goal of learning while creating meaning is part of the instructional process. However, we would point out that not all researchers support these concerns with meaningful stimuli. Eisdorfer et al. (1970) reported that meaningfulness was not an important component of age differences in learning. Obviously, additional research is required to understand this area of inquiry more fully.

Interference

A variety of factors may interfere with the ability of older learners to undertake effective learning. For example, Schaie and Strother (1968) suggested that any number of distractions in a person's life or in the learning situation can cause debilitating anxiety. Arenberg and Robertson-Tchabo, 1977; Carpenter, 1967; and Kuhlen, 1970, all have found that a lack of self-confidence is a problem. In many instances, women have been found to be more anxious or to have lower self-concepts than men (Symposium, 1973). Baltes and Labouvie, 1973, also have noted that a propensity not to answer test questions (omission errors) among elderly is an interference or negative motivator.

Problems still exist, however, in interpreting or making practical use of these findings. Goulet (1970), for example, suggested that we do not really know how interference is manifested. Research also is being carried out to better understand what test anxiety really means. Bolton (1978) perhaps gave the most useful advice when he urged that teachers of older adults do everything they can to reduce environmental distractions, personal fears, and

anxiety producing requirements in the learning setting.

Hesitancy

Hesitancy, cautiousness, and reluctance to risk making errors are discussed by a variety of researchers. Okun (1977) and Okun and DiVesta (1976) suggested that cautiousness tendencies in older learners are direct motivation inhibitors. Lack of risk taking and a concern for accuracy also are thought to be learning obstacles (Botwinick, 1973; Canestrari, 1963, 1968). Jones (1979) noted that learner's attitudes and self-concept perceptions may have as much effect as age on learning abilities.

Obviously, the teacher of older adults needs to utilize those methods or approaches that minimize the possibility of making errors or entering perceived high risk situations. However, Palmore (1970) suggested that the normal aging person tends to find ways of compensating for losses in one area by increases in other areas. Those responsible for guiding the learning of older adults need to find ways of facilitating such compensating abilities.

Speed and Pacing

Several steps can be taken by the teacher of older adults in relation to speed problems. For example, the time allowed for tests or for responses to queries can be made flexible. Facilitating self-paced learning wherever possible also is important. Finally, speed can be controlled in most instances involving older adults as learners by using appropriate pacing procedures (e.g., see Arenberg and Robertson-Tchabo, 1977; Labouvie-Vief, 1976).

The instructor's role also is important in terms of the speed of presenting information or expectations for their learner's response speed (Witte and Freund, 1976). Most authorities suggest that there is a natural slowing of the learning process that occurs with age; nevertheless, the relationship to cognitive capacity is not completely understood. Slowing is most likely associated with several factors which relate in some way to learning, for example, perceptual deficits, response time, processing time, and remembering time.

If a teacher allows for adequate response time, for example, research suggests that the elderly will perform about as well as younger people (Eisdorfer, 1965). The reverse of adequate time affecting older adult learning can be inferred from such findings. Thus, current and potential teachers of older persons should examine how they pace the learning

activities, how they design learning materials, and how they obtain feedback on their own effect in the classroom.

In short, a variety of procedures are available in working with older adults. However, one should be aware of limitations in the various research findings. For example, complicated experimental instructions have resulted in misconceptions (Arenberg and Robertson-Tchabo, 1977). Similarly, complicated assignments or task instructions from the teacher may create the same problem in the classroom. The ways in which information is presented also appear related to cognitive performance (Arenberg, 1976).

Organizational and Associational Abilities

The literature is fairly conclusive that older people have more difficulties than younger people in maintaining organizational effectiveness in terms of learning. A hesitancy by learners to organize, the specificity or ordering required, and the amount of pressure applied by teachers are some of the main concerns in this area.

Generally, many experts recommend that a variety of advanced organizing techniques are essential for efficient learning. Reviewing or visual analogies, instructor assistance in helping learners to integrate new information with old, and encouraging practice techniques also are important organizing means. A plethora of advanced organizers and cuing devices are suggested, including the use of outlines, abstracts, and summaries, prequestioning techniques, instructional objectives, and pictures or other visuals.

Closely related to organizational deficiencies are the widespread findings that older people have difficulties in generating mediators, i.e., associational relationships between inputs and outputs. Catino et al. (1977) found that older persons often require more time to form such relationships and may not want to use symbolic or novel forms of mediation. S.K. Gordon (1975) found that verbal mediators seemed to be used the most. Several researchers recommend using verbal, visual, or imaginal mediators. The instructor of older adults can assist by constructing acronyms, rhymes, mental images, lists, tables, and pictures.

THE NEED FOR FURTHER RESEARCH

It should be clear that a great deal of general research interest exists in this area. Of less interest is the study of older adults in terms of learning activity, needs, and potential. Nevertheless, interest in these areas appears to be on the increase.

One of the main problems is that much of the research on the learning capacity of older adults has been cross-sectional in nature. That is, we have some understanding of generational and demographic differences but no real comprehension of change over time. The few longitudinal studies conducted to date often demonstrated a dimension of knowledge about learning activity and ability quite different from cross-sectional findings. It seems imperative, therefore, that considerable resources be invested in long-term efforts.

A related situation is the fact that much of what we know even from cross-sectional research comes from the study of just the "old": the retired, those involved with senior programs, and the institutionalized. Thus, middle-aged and younger adults as learners need to be studied in light of their current abilities, preparation for later life learning, and changing need patterns.

Another problem has been the frequently unknown effect of researchers themselves on study results. The types of testing procedures, the definition of the problem in relation to existing theory, and the "halo effect" experienced by subjects all have potential bearing on results. Clearly there is a need for improved methodologies specifically designed for research on the older person.

Perhaps the most positive sign of growth in understanding how to be successful in guiding the older adult learner is the

merging of adult education and gerontology that has taken place in the last decade. Researchers trained in both areas are now engaged in study. Many practitioners are receiving training based on much of the research reviewed in this paper. Educational gerontology as a field of study is gaining popularity.

A variety of suggestions can be gleaned from the literature reviewed here. Several of these are provided below. Additional suggestions undoubtedly will be generated by the readers.

1. There is a need for the development of teaching techniques specific to older adults. Research on such topics as effectiveness, timing, pacing, and sequencing will help in such development.

2. A related need is to understand how to teach the teachers to become adept at utilizing various techniques. The need to understand how human service practitioners who receive much of their training through in-service activities is especially important.

3. Current research about learning mode preferences suggests that many older people select themselves as the primary planners and directors of their learning. Thus, we need to know more about factors of success associated with self-directed learning, how resources are acquired or developed, and how self-directed learning can be facilitated by institutionally-sponsored people.

4. Although much is known about the learning needs and interests of older persons, more research is required in order to stay abreast of changing needs, to better understand such dichotomous categories as "instrumental" versus "expressive," and to determine how program planning can be tied to needs assessment efforts.

5. The literature revealed that much is known about the learning capacity and problems of older people. However, conflicting findings regarding what still needs to be known is evident. Additional research on memory, learning detriments, non-cognitive factors associated with learning, and related topics is required.

6. The contextual model described earlier (Hultsch, 1977) appears to be an evolving area of understanding how adults learn. An exciting area of future study will be to determine how the older person interacts with and integrates new knowledge.

Although these few suggestions are broad in nature, they provide an overall awareness of what lies ahead as we strive to better understand how to guide the older adult learner. Even if the readers do not personally undertake the required research, it is hoped that they will be stimulated to stay abreast of such research, to think critically about the findings, and to challenge those doing research to produce practical and useful knowledge.

Knowledge on how to cope with the learning limitations of older adults is growing at a rapid rate. The unparalleled capacity of the aging person to cope, compensate, and build on the experience of a lifetime of living is a marvel to see. We are only beginning to obtain a glimpse of that potential.

APPENDIX A

SOME ANECDOTAL EXPERIENCES RELATED TO WORKING WITH OLDER ADULTS

How to Fail without Really Trying!

The following is an example of a situation described to me by the person after she had taken one of my graduate courses: A.F., social worker for a county welfare department, was asked to make a presentation on changes in the food stamp procedures to a group of congregate meal participants. She was a little uncertain about the subject matter, so she carefully outlined her talk. She arrived early enough to set up a podium at the opposite end of the room away from the serving line. Precisely at 12:15 p.m. she began her talk. She finished reading her material and looked up to see a hand in the air from a person sitting at the table nearest her. She said she would answer questions individually after she moved to a table and sat down. On the way home she mused to herself, "I thought that I would have more than two people come up with questions."

A Class on Recreational Leadership

A few years ago I was asked to teach a group of senior center volunteers how to organize recreational and physical fitness activities for center participants. All volunteers were retired, mostly from white collar or homemaker roles, and in good health.

I designed a variety of potential learning activities and put together a booklet of resource materials. I arrived at the designated classroom for the first session about an hour early. After discovering I had been assigned a large room where movies were shown and that contained rows of chairs lined up, I preceeded to commandeer the staff conference room. I quickly arranged tables in a square with chairs around the outside edge.

Turning on all the lights, opening some curtains along a set of north windows, and bringing in the coffee pot from the other room completed my initial preparation.

As the participants drifted in, I introduced myself, got coffee for those who wanted it, and had each person pin on a name tag so I could begin memorizing names. After all had assembled, I began an informal discussion or my background, why I had been asked to help, and some of the potential topics for study. Participants slowly began to join in the discussion; we spent about thirty minutes sharing perceptions of recreation needs they might want to respond to in the future.

I then asked them to work in three small groups of five each for the purpose of further discussing potential study areas, adding new ideas, and prioritizing what we should work on during our sessions together. I provided each group with sheets outlining several possible study areas and asked them to select a moderator or recorder for purposes of sharing their results with the other groups. I "floated" among the groups clarifying points and answering questions.

After about forty-five minutes of discussion, each leader shared the group's results. I recorded them with a large, black magic marker on some white newsprint taped to the walls. We all discussed the three group reports, merged needs or topics of concern together where possible, agreed on an agenda of activity for the next five weeks, and committed ourselves to building a notebook of ideas, resources, and other notes of personal meaning as a supplement for the resources notebook I then provided.

I concluded the session by involving them all in learning some physical fitness and stretching activities that could be used with older persons and suggested some public library material available for them if they were interested.

During that next week I organized the remaining five sessions, secured a film on recreation and leisure for a session, made arrangements for a 4-H folk dance team and a cardio-pulmonary resuscitation team from a local hospital to put on demonstrations during two sessions. (These last two needs had emerged as extra interests during the group discussion.) I also outlined these on a class planning sheet. I then boned up on several of the recreational activities I wanted to demonstrate during the remaining sessions.

The second and third sessions proceeded nicely with the two demonstrations, with my leading the participants in several activities, and with a positive group rapport. The second

session had started with a brief discussion of the plan for the remaining sessions, a general confirmation of the plan, and my promise that we would take stock of where we were and how we were doing periodically. Each three-hour session was broken down into fifty minute units with breaks in between and a concluding fifteen-minute discussion of topics covered and ideas for their resource notebook. I summarized the main points by writing them on a chalkboard and then distributed a summary of what was covered at the beginning of the next session. By the third session participants began freely sharing ideas, resources, and material with each other. One person typed a summary of several books she had read during the two weeks and distributed it to the others. I attempted throughout not to go too fast, to make sure each activity was well understood, to speak clearly and loudly, and to tie all points or information on activities back to their own experiences.

At the conclusion of the third session, I asked each participant to complete an open-ended assessment sheet which called for feelings about the progress of the training effort, suggestions for new topics to be covered, and any other concerns. In reading the forms, I noted that five of the participants expressed in some way the concern of still not having the confidence to lead others in the various activities they were learning. Subsequently, I reorganized the fourth and fifth sessions to include material for planning activities and leading others. This was done in order to facilitate their getting up in front of the group and to allow time for talking about factors associated with aging that may affect learning or involvement.

At the beginning of the fourth session I shared my observations about this new need; I obtained general agreement that we should spend more time on developing leadership skills and building general awareness of the aging process. We proceeded to do this. Although fewer activities were learned, each participant had a chance to lead an activity. During the fifth session, a commitment was made by ten of the participants to organize and direct a recreational session at a senior center within the next week.

The sixth class period was devoted to a discussion of the teaching experiences of the eight who had actually directed sessions, sharing of the resource booklets developed by each participant, and general answering of questions. A self-evaluation of progress and learnings was requested from each person through an open ended form; participants also completed a form that evaluated the instructor. A discussion of further needs and learning interests concluded the experience.

Serving as a Conference Resource Person

The author frequently is asked to serve as a resource person for a conference or workshop. Although not specifically related to the older learner, this anecdotal note about an in-service training activity will illustrate some concepts related to this paper.

Last year I was asked to serve as resource leader for a session on program planning during an in-service training program at a community college. Initially, they wanted me to run two, back-to-back, one-hour sessions for rotating groups. I negotiated a two-hour session for a single group. I also asked for a room large enough to seat all the participants in a circle (sixty-four attended), a chalk board, a newsprint pad and stand, adequate sound amplification, and an overhead projector with a screen.

I developed a sheet outlining possible topics for discussion and study based on my perceptions of what the probable participants did as well as feedback from a phone conversation with a former student who now worked as a teacher in a community college. I also put together sets of transparencies on various topics related to program planning, developed several summary handouts on what I felt were crucial areas, and put together an annotated bibliography on various books, journals, and other material on program planning.

To begin the session, I had the participants introduce themselves and briefly describe their positions. I then described what I believed to be some skills crucial for effective program planning. I handed out the sheet of potential topics and asked them to pull their chairs into new circles of about ten people each. They were asked to discuss the topics in light of their most important needs and to be prepared for sharing the group's three most important needs in a report back to the larger group. This required negotiation and prioritizing.

During the group reports I summarized on newsprint the prioritized topics, merging or seeking clarity where appropriate, and, finally, obtaining consent to present information on six topics. Approximately fifty minutes were required for these activities.

As participants took a ten minute coffee break, I quickly pulled out of my box of resource materials, the various sets of transparencies, and notes relating to the prioritized topics. During the second hour I introduced concepts using the transparencies as stimulators; I also summarized points made during the questioning and sharing. Since the third topic was

one for which I was unprepared, I encouraged some sharing and contributions on the topic from the participants.

We only were able to get through four of the topics because of some excellent large group interactions. Therefore, during the last ten minutes I encouraged each person to seek information on their own, to continue their dialogue in small groups on the job, and to ask their supervisors to provide additional in-service training opportunities. I distributed the summary sheets, the annotated bibliography, and a single sheet containing a few open-ended evaluation questions. The majority filled out the evaluation forms and I engaged in dialogue with several who stayed after the two-hour period ended. I later summarized the evaluation sheets and added some perceptions regarding future training needs in a report sent to the community college administrative staff.

Developing a Mediator (Dear Sir, I am Good)

One day some colleagues and I were discussing a way of remembering the names and order of five components in a model for learning they had been working on: differentiating, structuring, integrating, abstracting, and generalizing. I pushed the pencil around for awhile and came up with a sentence using the first letter from each word in order; Dear sir, I am good! It took, it works, and now my colleagues and I often refer to the dear-sir-I-am-good model in our normal conversation.

Remembering Cues

A colleague works as a volunteer in a senior citizens center. She uses a "trick" for helping a person or group to remember some name that is on the tip of the tongue but not quite out yet. She has the person or the group go through the alphabet, letter by letter, and throw out several names beginning with each letter. Very frequently it results in the remembered name, usually to the delight and amazement of all.

Night and Day

During a research project on successful aging determinants, I interviewed several people in nursing homes. One person, in his nineties, was an early agricultural specialist in Iowa. He has always remained active, writes, carries out research, and is perceived by all who know him or work around him to be mentally active, even though he is now in a state of decreasing health, existing primarily in a small room, and with mobility possible only through the use of a walker.

The same day I interviewed him, I noticed another person slumping in an outer reception room chair. He was in a fairly disheveled state, clothing awry, and not noticing anything around him. I asked a nurse about his condition and she said he was having senility problems but enjoyed sitting in the lobby to watch the people go by.

I approached him, got his attention, and eventually started a conversation. After some difficult starts, I got him talking about himself. It turned out he was seventy-six years old, his wife had been dead for five years, and his children were all living on the West Coast. He, too, had been an agricultural specialist until his retirement ten years prior. We talked about his experiences, his grandchildren, and his views on today's agriculture. During the hour long conversation he transformed before my eyes into the image of my other interviewee. He slowly straightened up in his chair, became animated, straightened up his clothing, and ran his hand through his hair. He smiled, he talked wisely, he wished for the future, he became alive!

Two hours later I passed by again on my way home. An untouched tray of food was lying on a table next to him, he was slumped down in his chair, glassy eyed, his clothing again crumpled. It was a long time before I could think about much of anything else.

Maudlin? Perhaps! But what is that almost mysterious quality called "human potential"? What is our role as educators in enhancing that potential? What should we be doing that we are not?

Eldercollege

A year ago the Iowa State University Alumni Foundation funded a project called Eldercollege. The goal of the project was to provide college-level education to older persons. The following is an outline of the sequential activities in that project. It is included in order to give the reader a sense of how the staff attempted to employ what we could from the literature and theory on providing educational opportunities to older adults.

1. Proposal conceptualized - 3 months, May to July

   Ideas discussed with colleagues
   Literature reviewed
   Trip to Kentucky and Washington, D.C. to review similar programs and to seek advice
   Draft of proposal written

Draft discussed with chief administrators
Final draft completed

2. Proposal submitted to funding source - 1 month, August

Initial proposal was designed to be the development of a prototype program and the funding source was alerted in the initial stages of the development effort that the proposal would be coming
The planner, a potential staff member, and a chief administrator met with the funding source administrator to discuss the proposal
An initial favorable response facilitated the bureaucratic machinery to be initiated

3. Funding approval received - 1 month, September

Office established
Staff hired and oriented
Master Gantt chart (calendar of events) developed
Project started

4. Data collection phase - 3 months, October to December

Advisory council consisting of representatives of potential clientele was formed and met with twice
Master mailing list compiled from various sources
Additional literature reviewed (ERIC and various other sources)
Informational letters seeking advice written to similar projects around the country
Progress-assessment report written
Instrument development initiated
Advisory council and panel of experts judge instrument for content validity
Instrument pilot tested with ten people
Outside evaluator reviews pilot test data and meets with the staff
A second draft of the instrument is developed and reviewed by the staff
A final draft is developed
The instrument is mailed to a sample of 600 (the initial mailing, two follow-up mailings, and some phone calling resulted in a 65 percent return rate)

5. Data analysis phase - 2 months, January to February

Twelve random telephone validations completed
Data coded
Data computer analyzed and compared with existing theory
Staff put the data through various decision-making screens

(institutional, philosophical, pre-retirement counseling office, and available resources)
Initial report of need developed
Staff, chief administrators, and outside evaluator react to report
Progress report provided to funding source
Final report developed

6. Program planning and prototype development - 1 month, March

Two highest ranked needs selected
Objectives for a program developed (measurable)
Advisory council reacts
Initial program outlined (two courses)
Staff evaluates initial plans, checks Gantt chart, and makes appropriate modifications
Instructional staff identified (ten different instructors)
Training materials on how to teach older people developed
Instructors trained
Support material needed for the courses identified
Library and media resources obtained
Parking permits for students arranged
Coffee and snacking arrangements made
Necessary fees for course established and payment arrangements made
Publicity outlined and developed including brochures for mailing, newspaper advertising, and literature for offices dealing with older people
Evaluation techniques and procedures developed including a progress assessment completed by the outside evaluator
Registration procedures developed
Accounting procedures developed
Room arrangements finalized

7. Assessment of commitment to proceed - 1 month, March

One course did not have enough students to warrant it beginning
Students all agreed to enter the other course
Staff determined that time of day (any evening) just would not fill with elderly even though initial needs information showed that they would

8. Program (course) initiated - 2 months, April and May

Students enrolled
Course monitored

9. End of course evaluation - 1 month, May

   Course content evaluation form developed
   Instructor evaluation forms developed
   Future needs and interests form developed
   Outside evaluator consulted
   Instruments administered

10. End of course banquet held - May

    Administrators, funding agency people, staff, and students (100 attended)
    Deemed a huge success

11. Overall evaluation completed by staff and outside evaluation completed - June

12. Funding for enlargement and continuation being sought

APPENDIX B

RESOURCES

Periodicals

In addition to a number of significant books cited in this paper, numerous journals include articles related to learning and the older person. Some of the major ones are as follows:

Adult Education. Published quarterly by the Adult Education Association of the U.S.A. A research-oriented journal that frequently contains reports of studies or theoretical pieces related to education of the elderly.

Adult Education
Studies in Adult Education
101 Gabel Hall
Northern Illinois University
De Kalb, Illinois 60115

Aging. Published bi-monthly by the federal Administration on Aging. This journal, the official publication of the U.S. Administration on Aging, reports on programs for, by, and with the elderly.

Aging
Superintendent of Documents
Government Printing Office
Washington, D.C. 20402

Educational Gerontology: An International Quarterly. Published quarterly by Hemisphere Publishing. A combination practitioner and research journal that includes a wide variety of information

related to all aspects of working with the elderly.

Hemisphere Publishing Corporation
1025 Vermont Avenue, N.W.
Washington, D.C. 20005

50 Plus. Published monthly by the Retirement Living Publishing Company. This periodical occasionally includes articles of interest to educators of older adults.

50 Plus
99 Garden Street
Marion, Ohio 43302

The Gerontologist. Published bi-monthly by the Gerontological Society. This journal is aimed at the professional practitioner in the field of gerontology.

The Gerontologist
Gerontological Society
One Dupont Circle
Washington, D.C. 20036

International Journal of Aging and Human Development. Published eight times per year by the Baywood Publishing Company. Included are psychological and sociological studies of aging and the aged. Occasional articles relate to such topics as educational needs and programs of the elderly.

Baywood Publishing Company, Inc.
120 Marine Street
P.O. Box D
Farmingdale, New York 11735

Journal of Gerontology. Published bi-monthly by the Gerontological Society. This periodical includes a variety of articles written primarily for the professional researcher.

Journal of Gerontology
Gerontological Society
One Dupont Circle
Washington, D.C. 20036

Lifelong Learning: The Adult Years. Published ten times a year by the Adult Education Association of the U.S.A. It is directed toward the professional adult education practitioner. There usually is at least one article per issue related in some way to working with the elderly.

Lifelong Learning: The Adult Years
Adult Education Association of the U.S.A
810 Eighteenth Street, N.W.
Washington, D.C. 20006

Modern Maturity. Published bi-monthly by the American Association of Retired People. This periodical occasionally contains articles related to the teaching of elderly or to the elderly as teachers.

Modern Maturity
American Association of Retired People
1909 K Street, N.W.
Washington, D.C. 20049

Professional Associations

In addition to state and regional associations, three of the major national groups are as follows:

Adult Education Association of the U.S.A. (AEA). This association sponsors an annual conference, publishes Adult Education and Lifelong Learning: The Adult Years, and makes available to members and others a wide variety of publications related to the adult education field. One of the central subgroups within the association is the Commission on Education for Aging that puts on meetings and publishes a newsletter. The association also has a Washington office and serves as a voice for the adult education field.

Adult Education Association of
the U.S.A.
810 Eighteenth Street, N.W.
Washington, D.C. 20006

Association for Gerontology in Higher Education (AGHE). This association sponsors an annual meeting, publishes a newsletter and other materials, and serves as a voice for educational gerontology professionals in higher education through its Washington office.

Association for Gerontology in
Higher Education
One Dupont Circle
Suite 520
Washington, D.C. 20036

Gerontological Society. This association publishes The Gerontologist and the Journal of Gerontology and a variety of other materials. It also sponsors an annual conference, has a Washington office, and serves as a voice for a wide variety of gerontology professionals.

Gerontological Society
One Dupont Circle
Suite 520
Washington, D.C. 20036

Political Groups

A wide variety of political groups have been formed in the past decade to provide assistance to the elderly or those working in the field of aging, e.g.,

Select Committee on Aging. This committee has a staff that publishes materials, carries out special studies, and generally represents the interests of the elderly in the House. They publish regular reports and newsletters that are distributed to those on their mailing list.

Select Committee on Aging
U.S. House of Representatives
Room 712
House Office Building Annex 1
300 New Jersey Avenue, S.E.
Washington, D.C. 20515

Special Committee on Aging. This committee also has a staff and publishes materials, carries out special studies, and generally represents in the Senate the interests of the elderly. They publish regular reports and newsletters.

Special Committee on Aging
United States Senate
Room G-233 Dirksen Senate Office Building
Washington, D.C. 20510

Other Groups. Most states have State Commissions on Aging and local or Area Agencies on Aging which exist to provide materials, assist the practitioner, and serve as a local or regional voice for the elderly.

Professional Training Opportunities

One or more graduate or undergraduate training programs on gerontology, educational gerontology, or adult education exist in nearly every state. Check your nearby university and college catalogues, your State Department of Education, or your State Commission on Aging for more information. In addition, the federal Administration on Aging has helped to form training centers and educational consortia throughout the country.

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